

Fine Filters Calculations for CR Ceilings - Table C-1

Project: Cleanrooms Facility for Semiconductors Research

Clean Rooms Facility from IZO 4 : 9 :System

Quotation: BADRY CRT Quote No. 16201-00, Rev 00 - April 2021

(Mech., Elec. & Infra.) - Main Contractor :Client

S.N	Space Ref	Space Name	Classification		Space Area M ²	Filter System	Space Filtration Efficiency	Filter Coverage %	Filter Area M ²	Filter Population Ft ²	# Filter 120X60 CM	Air Velocity FPM	Filter Type	Filter Series	Filters Air Circulation CFM
			ISO	CLASS											
1	EN	Facility Entrance	8	100,000	18	FFU	99.97	5%	0.90	10	1	8	HEPA	H-14	78
2	GR	Changing Room	8	100,000	35	FFU	99.97	5%	1.75	19	2	8	HEPA	H-14	151
3	AL1	Clean Corridor 1	7	10,000	9	FFU	99.997	10%	0.90	10	1	15	HEPA	H-14	145
4	WA1	Working Area 1	6	1,000	162	FFU	99.997	25%	40.56	437	56	27	HEPA	H-14	11,789
5	GR	Gas Room	7	10,000	30	FFU	99.997	10%	3.00	32	4	15	HEPA	H-14	484
6	YR1	Yellow Room 1	5	100	48	FFU	99.9997	65%	31.20	336	43	40	HEPA	H-14	13,433
7	AL2	Clean Corridor 2	7	10,000	18	FFU	99.997	10%	1.80	19	3	15	HEPA	H-14	291
8	LAB1	Clean Room Lab 1	4	10	66	FFU	99.99997	100%	66.00	710	92	60	ULPA	U-15	42,625
9	WA2	Working Area 2	6	1,000	66	FFU	99.997	25%	16.50	178	23	27	HEPA	H-14	4,795
10	YR2	Yellow Room 2	5	100	66	FFU	99.9997	65%	42.90	462	60	40	HEPA	H-14	18,471
11	RL	Research Lab	6	1,000	66	FFU	99.997	25%	16.50	178	23	27	HEPA	H-14	4,795
12	SR	Student Lounge	7	10,000	66	FFU	99.997	10%	6.60	71	9	15	HEPA	H-14	1,066
13	AP1	Aisle Path 1	9	1,000,000	60	Diffuser	90%	N/A	0.00	0.00	0	5	PRE	G-4	N/A
14	AP2	Aisle Path 2	9	1,000,000	60	Diffuser	90%	N/A	0.00	0.00	0	5	PRE	G-4	N/A
S1	CRF	CR-SC / Fine Filtration CALC			770	FFU System		30%	229	2,461	318	Total No of Filters			98,123